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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/672,254	09/26/2003	Jens-Christian D. Meiners	UOM 0275 PUSP	8836
22045	7590	01/11/2008		
BROOKS KUSHMAN P.C. 1000 TOWN CENTER TWENTY-SECOND FLOOR SOUTHFIELD, MI 48075			EXAMINER LEE, EDMUND H	
			ART UNIT 1791	PAPER NUMBER
			MAIL DATE 01/11/2008	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary**

Application No.

10/672,254

Applicant(s)

MEINERS ET AL.

Examiner

EDMUND H. LEE

Art Unit

1791

– The MAILING DATE of this communication appears on the cover sheet with the correspondence address –

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 19 October 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 21-40 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 21-40 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_\_

### DETAILED ACTION

1. It should be noted that the examiner of record has changed from A. Ortiz to Edmund Lee.

2. In view of the appeal brief filed on 10/19/07, PROSECUTION IS HEREBY REOPENED. The new ground of rejection is set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31 followed by an appeal brief under 37 CFR 41.37. The previously paid notice of appeal fee and appeal brief fee can be applied to the new appeal. If, however, the appeal fees set forth in 37 CFR 41.20 have been increased since they were previously paid, then appellant must pay the difference between the increased fees and the amount previously paid.

A Supervisory Patent Examiner (SPE) has approved of reopening prosecution by signing below.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and

the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 21-33, and 34-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bauer (USPN 4304749) in view of Desmond (USPN 7214348). In regard to claim 21, Bauer teaches the basic claimed process including a fluidic device having at least one interconnect (col 2, lns 28-60; col 5, lns 15-25; fig 1)--body member 12 and cover plate 13 constitute the at least one elastomeric portion and substrate, and passages 14 and 15 constitute two interconnects. It should be noted that the mold cavity of Bauer extends over portions of the body member, the cover plate, and passages (fig 1). Bauer, however, does not teach a microfluidic device. Desmond teaches a microfluidic oscillator, i.e., fluid passages having baffles therein (figs 1-2 and 18). Bauer and Desmond are combinable because they are analogous with respect to fluidic devices, i.e., oscillators. Since it is well-known in the molding art to downscale or miniaturize devices to meet consumer needs, it would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute the microfluidic oscillator of Desmond for the oscillator of Bauer in order to produce microfluidic oscillators with ease and low cost. In regard to claims 22, 24 and 26-29, the use of a specific material is a mere obvious matter of choices dependent on the desired final product and of little patentable consequence to the claimed process since it is not a manipulative feature or step of the claimed process. Further, the claimed materials are well-known in the microfluidic device art. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the claimed materials

in the process of Bauer in order to form diverse microfluidic devices having varying characteristics. In regard to claims 23, 25, and 32-33, such limitations are taught by Bauer (col 2, lns 28-60; col 5, lns 15-25; fig 1). In regard to claims 31-32, Bauer teaches injecting the material into the cavity while the portions are located therein. It is well-known in the molding art that pouring/casting is a substitutable alternative for injecting. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to pour the material into the cavity of Bauer instead of injecting in order to reduce production costs and equipment costs. In regard to claims 34-37, the structure of the claimed products by process claims are taught by the above rejections under Bauer in view of Desmond.

5. Claims 38-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bauer (USPN 4304749) in view of Desmond (USPN 7214348). In regard to claim 38-40, Bauer teaches the basic claimed process including a fluidic device having at least one interconnect (col 2, lns 28-60; col 5, lns 15-25; fig 1)--body member 12 and cover plate 13 constitute the at least one elastomeric portion and substrate, and passages 14 and 15 constitute two interconnects. It should be noted that the mold cavity of Bauer extends over portions of the body member, the cover plate, and passages (fig 1). Bauer, however, does not teach a microfluidic device. Desmond teaches a microfluidic oscillator, i.e., fluid passages having baffles therein (figs 1-2 and 18). Bauer and Desmond are combinable because they are analogous with respect to fluidic devices, i.e., oscillators. Since it is well-known in the molding art to downscale or miniaturize

devices to meet consumer needs, it would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute the microfluidic oscillator of Desmond for the oscillator of Bauer in order to produce microfluidic oscillators with ease and low cost. In regard to claim 39, the use of a specific material is a mere obvious matter of choices dependent on the desired final product and of little patentable consequence to the claimed process since it is not a manipulative feature or step of the claimed process. Further, the claimed material is well-known in the microfluidic device art. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the claimed material in the process of Bauer in order to form diverse microfluidic devices having varying characteristics. In regard to claim 40, such limitation is taught by Bauer (col 2, lns 28-60; col 5, lns 15-25; fig 1).

6. Applicant's arguments with respect to claims 21-40 have been considered but are moot in view of the new ground(s) of rejection.

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following US patents teach the state of the art: 6290791; 2002/0134907; 6548895 and 6443179.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to EDMUND H. LEE whose telephone number is:

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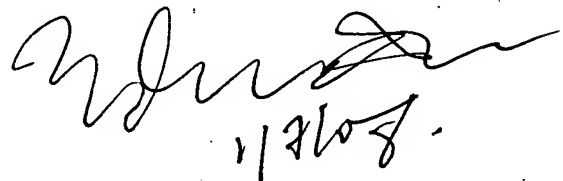
571.272.1204. The examiner can normally be reached on MONDAY-THURSDAY  
FROM 9AM-4PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Johnson can be reached on 571.272.1176. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

EHL

EDMUND H. LEE  
Primary Examiner  
Art Unit 1791



1/2/08



CHRISTINA JOHNSON  
SUPERVISORY PATENT EXAMINER